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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,633	02/26/2002	G. Diwakar Vishakhadatta	SILA:080	1801

7590 03/25/2005

O'KEEFE, EGAN & PETERMAN, L.L.P.
Building C, Suite 200
1101 Capital of Texas Highway South
Austin, TX 78746

EXAMINER

TRAN, TUAN A

ART UNIT	PAPER NUMBER
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2682

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/083,633

Applicant(s)

VISHAKHADATTA ET AL.

Examiner

Tuan A Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 11-14 and 31-34 is/are rejected.
- 7) ☒ Claim(s) 4-10, 15-30 and 35-43 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/02/2002.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed 12/02/2002 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because ref des C22-C72 are missing. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 3 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 11274401.

Regarding claims 1, JP 11274401 discloses a calibration circuitry (See fig. 1), comprising: an adjustable capacitor 5, the adjustable capacitor 5 having a capacitance

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that varies in response to a plurality of control signals; a voltage generator 6, the voltage generator 6 configured to provide a measurement voltage VLP that depends on the capacitance of the adjustable capacitor 5; a reference voltage generator 7, the reference voltage generator 7 configured to provide a reference voltage V_r ; and a controller 8, the controller 8 configured to provide the plurality of control signals based on the relative values of the reference voltage V_r and the measurement voltage VLP (See figs. 1, 3 and the provide English translation).

Regarding claim 3, JP 11274401 discloses as cited in claim 1. JP 11274401 further discloses the measurement voltage VLP is generated by alternately charging and discharging the adjustable capacitor 5 (See fig. 1 and the provided English translation).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11-14 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11274401 in view of Garavan et al. (5,668,551).

Regarding claims 11-14, JP 11274401 discloses a calibration circuitry (See fig. 1), comprising: an adjustable capacitor 5, the adjustable capacitor 5 having a capacitance that varies in response to a plurality of control signals; a voltage generator 6, the voltage generator 6 configured to provide a measurement voltage VLP that

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depends on the capacitance of the adjustable capacitor 5; a reference voltage generator 7, the reference voltage generator 7 configured to provide a reference voltage V_r ; and a controller 8, the controller 8 configured to provide the plurality of control signals based on the relative values of the reference voltage V_r and the measurement voltage VLP, wherein the measurement voltage VLP is generated by alternately charging and discharging the adjustable capacitor 5 and wherein the adjustable capacitor 5 comprises a plurality of switchable capacitors configured to adjust the capacitance value of the adjustable capacitor 5 in response to the plurality of control signals (See figs. 1, 3 and the provide English translation). However, JP 11274401 does not mention that the calibration circuitry resides within an analog-to-digital converter of an RF apparatus. Since Garavan teaches ^{that} to integrate a calibration circuitry having switchable arrays of capacitors that act as variable capacitor within an A/D converter circuitry (See fig. 1 and col. 3 lines 53-63) and the RF apparatus such as cellular phone comprising A/D converter is common in the art; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate the calibration circuitry as disclosed by JP 11274401 in the A/D converter circuitry of the RF apparatus for the advantage of calibrating the gain, offset, and/or linearity of the converter.

Claims 31-34 are rejected for the same reasons as set forth in claims 11-14, as method.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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- Baldwin et al. (6,735,4220 ; Krymski et al. (6,476,751) ; Takahashi (6,101,369) ; Nitta (2002/0025788) ; Takahara et al. (5,493,710).

Allowable Subject Matter

Claims 4-10, 15-30 and 35-43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 4, 15 and 35. JL 11274401 alone or in combination with Garavan discloses as cited in claims 3, 14 and 34. However, they fail to teach that the adjustable capacitor is calibrated by holding the plurality of control signals constant.

Claims 5-10, 16-30 and 36-43 are objected as being dependent upon claims 4, 15 and 35 respectively that have been objected.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tuan Tran** whose telephone number is **(703) 605-4255**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Vivian Chin**, can be reached at **(703) 308-6739**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

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or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



Tuan Tran

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LEE NGUYEN
PRIMARY EXAMINER